WHAT IS CLAIMED IS:

1. An anti-surge device comprising:

an axial flow compressor;

means for introducing water droplets into an inlet duct to the compressor comprising a plurality of nozzles, a pump supplying high pressure water to the nozzles, and conduit connecting the pump and nozzles; and

elastic means for temporarily supplying sufficient water, in the event of shutdown of water supply, to the nozzles with gradually decreasing flow for a sufficient time to avoid surge.

2. An anti-surge device according to claim 1 wherein the elastic means comprises an accumulator connected to the conduit.

3. An anti-surge device according to claim 1 wherein the elastic means comprises an elastically flexible portion of the conduit.

4. An anti-surge device according to claim 1 wherein the elastic means comprises a spring loaded reservoir of water.

5. An anti-surge device according to claim 1 wherein the elastic means supplies water for at least one second after shutdown of water supply.

6. An anti-surge device according to claim 1 wherein the elastic means comprises a plurality of accumulators.

7. An anti-surge device according to claim 1 wherein the elastic means comprises an accumulator connected to each of a plurality of nozzle manifolds for introducing water droplets into inlet air to the compressor.

8. An anti-surge device comprising:

an axial flow compressor;

a fog generator for introducing water droplets into an inlet duct to the compressor; and

a reservoir containing sufficient water to gradually decrease flow, in the event of shutdown of water supply, for a sufficient time to avoid surge.

9. An anti-surge device according to claim 8 wherein the reservoir contains sufficient water to supply water to the fog generator for at least one second after shutdown of water supply.

10. An anti-surge device according to claim 8 wherein the reservoir comprises an accumulator.

11. An anti-surge device according to claim 10 wherein the reservoir comprises an elastically flexible conduit connected to the fog generator.

12. An anti-surge device according to claim 10 wherein the reservoir is activated by gas pressure to supply water to the fog generator.

13. An anti-surge device according to claim 10 wherein there are a plurality of fog generating manifolds and a reservoir is connected to each of the manifolds.

14. An anti-surge device according to claim 12 wherein each of the reservoirs comprises an accumulator.

15. An anti-surge device according to claim 8 wherein the reservoir comprises a plurality of accumulators.

16. An anti-surge device comprising:

an axial flow compressor;

means for introducing water droplets into an inlet duct to the compressor comprising a plurality of nozzle manifolds, and a pump supplying high pressure water to the manifolds; and

an elastic water supply connected to each manifold.

17. An anti-surge device according to claim 15 wherein each of the water supplies comprises an accumulator.

18. An anti-surge device according to claim 15 wherein the water supplies collectively contain sufficient water, in the event of shutdown of water supply, to gradually decrease flow of water for a sufficient time to avoid surge.

19. A method for preventing surge in an axial flow compressor comprising:

introducing water droplets to an air inlet duct to the compressor through a fog generator;

storing water under pressure in a reservoir connected to the fog generator; and

releasing water from the reservoir through the fog generator for a sufficient time to prevent surge of the turbine in the event other water supply to the nozzles is interrupted.

20. A method according to claim 18 wherein the water is released gradually over an interval of at least about one second.

21. A method according to claim 18 wherein the reservoir comprises a plurality of accumulators.

22. A method according to claim 20 wherein each accumulator has a different charging pressure.

23. A method according to claim 20 wherein water droplets are introduced via a plurality of nozzle manifolds and the reservoir comprises a plurality of accumulators, each accumulator being connected to a respective manifold.

24. A method for preventing surge in an axial flow compressor comprising:

introducing water droplets to an air inlet duct to the compressor through a fog generator;

storing water under pressure in a reservoir connected to the fog generator; and

releasing water from the reservoir through the fog generator gradually over an interval of at least about one second.

25. A method according to claim 23 wherein the reservoir comprises a plurality of accumulators.

26. A method according to claim 24 wherein each accumulator has a different charging pressure.

27. A method according to claim 24 wherein water droplets are introduced via a plurality of nozzle manifolds and the reservoir comprises a plurality of accumulators, each accumulator being connected to a respective manifold.

28. A method for preventing surge in a turbine including an axial flow compressor comprising:

introducing water droplets to the compressor;

storing water under pressure in a reservoir;

releasing water from the reservoir in the form of droplets into the compressor in the event other water supply to the nozzles is interrupted; and

gradually reducing flow of water droplets from the reservoir into the compressor.

29. A method according to claim 27 wherein the reservoir comprises a plurality of accumulators.

30. A method according to claim 28 wherein each accumulator has a different charging pressure.

31. A method according to claim 27 wherein water droplets are introduced via a plurality of nozzle manifolds and the reservoir comprises a plurality of accumulators, each accumulator being connected to a respective manifold.

32. A method for preventing surge in a turbine including an axial flow compressor comprising:

introducing water droplets to the compressor;

storing water under pressure in a reservoir; and

gradually releasing sufficient water from the reservoir in the form of droplets to the compressor to prevent surge of the turbine in the event other water supply to the nozzles is interrupted.

33. A method according to claim 31 wherein the reservoir comprises a plurality of accumulators.

34. A method according to claim 32 wherein each accumulator has a different charging pressure.

35. A method according to claim 31 wherein water droplets are introduced via a plurality of nozzle manifolds and the reservoir comprises a plurality of accumulators, each accumulator being connected to a respective manifold.